

ER

CLOSURE

REPORT



A Subsidiary of Smith International, Inc.

ENGINEER: Danny Foote **ER NUMBER:** 98017

DATE ISSUED: 01/19/98

INITIAL REQUEST:

Modify 20, 10432 carbides and 20, 14023 carbides. See attached drawings for modification specifications.

Load with MXD-30 tape. (Danny Foote will do)
Final and press on M3. (Press file 1313_cnt.R11)
Finish as 37325. (Lap to expose the upper most carbide tip)

EXPECTED FINDINGS:

The diamond table will sinter to a canted carbide surface.

SUMMARY OF RESULTS:

The diamond table did sinter to the canted carbide surface as expected.

CONCLUSIONS AND RECOMMENDATIONS:

Further development of this part needs to be pursued, assuming that the customer has an application for such a part.

1. The angle of the Cant needs to be optimized.
2. Formation of the diamond tape needs to be refined. I suggest a format of three layers of varying thicknesses and shapes.
3. Special tooling for the "preform" step prior to debind will be needed.

Attach any test result data or charts or reports from other departments.

DATE CLOSURE REPORT TURNED IN: February 12, 1998.

PEER
REVIEW: _____

CONFIGURATION MANAGEMENT REVIEW: _____

ER CHECKLIST

Dept.	Change req'd		Comments
Carbide Preparation			
Modification Req'd?	Y	N	Send 20 10432 & 20 14023 carbides to Scott Packer. Scott is to modify the carbides per 10432_SPECIAL & 14023_SPECIAL draws which are attached.
Cleaning/ Reduction	Y	N	No carbide reduction required.
Lab			
Mix/Powders	Y	N	
Tape	Y	N	
OP sheets	Y	N	
Other	Y	N	
Assembly			
Can/overlap	Y	N	
Carbide	Y	N	Load 10 10432's & 10 14023'. Keep carbide part numbers separate. Do not mix.
Tooling	Y	N	
OP sheets	Y	N	
Other	Y	N	Use MXD 30 diamond. Contact Danny Foote before loading.
Final			
Components	Y	N	Load the 10432's as 32025's. Load the 14023's as 37325's.
OP sheets	Y	N	
Other	Y	N	
Press			
Pressfile	Y	N	Contact Ron Eyre before pressing. 10432 carbides are loaded as 32025's. 14023 carbides are loaded as 37325's.
OP sheets	Y	N	
Other	Y	N	
Finishing			
Prints	Y	N	
CNC Prog	Y	N	
Fixturing	Y	N	
OP sheets	Y	N	
Other	Y	N	Return Finished parts to Danny Foote.
If tooling product, check with Tooling Product Manager.	Y	N	
Special QC?	Y	N	